

Candidate Information

Position:	Research Fellow
School/Department:	School of Electronics, Electrical Engineering and Computer Science
Reference:	26/113410
Closing Date:	Monday 6 July 2026
Salary:	£41,419 - £49,536 per annum.
Anticipated Interview Date:	Friday 31 July 2026

JOB PURPOSE:

Fortran is one of the oldest programming languages still in active use today, having been first developed 70 years ago. Despite its age, it continues to contribute, and in some cases is indispensable, to many international science and engineering projects and products, such as climate change modelling. The FortranFuture NetworkPlus project is a three-year EPSRC-funded project that seeks to answer the high-level question: How do we sustain sciences, and engineering disciplines, currently dependent on Fortran so that they continue to advance knowledge – and contribute to society, the economy and the environment – for the next 70 years? Initially at least, FortranFuture takes a neutral position on this question, intentionally not presupposing an answer. Whatever the way forward for sciences currently dependent on Fortran – e.g., to invest in or divest of Fortran – there is the critical need to develop a strong international community in this area, to ensure that non-technical issues and challenges are sufficiently well understood, and to ensure appropriate tooling and other resources (including education and training) are available. Thus, there is the vital need to engage with complex sociopolitical expectations and constraints.

FortranFuture is an interdisciplinary collaboration between software engineering and social science researchers at Queen's University Belfast and University of Southampton. The project has (currently) 25+ institutional partners (in the UK and internationally) and, separately, a community of practice of 75+ practitioners, including research software engineers, computational scientists and other stakeholders and policy makers. FortranFuture will strengthen the existing community of practice, establish an interdisciplinary research network, undertake qualitative research (and potentially also quantitative research) to understand the communities' needs and priorities, and develop a roadmap for the future of Fortran based science. To support this activity and outputs, FortranFuture has flexible funding to fund small/er investigative projects undertaken by practitioners and researchers that will complement the work of the Research Fellow and the core investigative team.

We are looking for a Research Fellow with excellent research skills and a strong interdisciplinary outlook, to support the socio-technical and policy elements of the study. You will:

1. Undertake reviews of scholarly debates and the wider policy landscape (and potentially systematic reviews, e.g., systematic mapping) to provide a baseline for subsequent study and for the FortranFuture roadmap.
2. Identify, design and conduct research using a range of qualitative and potentially also quantitative methodological techniques, (for example interviews, focus groups, observation and ethnography, survey design and data analytics), with the aim of understanding the international Fortran-based science communities, and the Fortran ecosystem including the policy landscape.
3. Actively engage with the interdisciplinary activity of flexible-funded investigations and support the integration of outputs to ensure a coherent body of research for FortranFuture.
4. Actively engage with the interdisciplinary research network and the community of practice, participating in community events, including co-facilitation of such events, and supporting the collection and analysis of data to ensure diverse voices in the community are heard.
5. Disseminate the work of the FortranFuture through appropriate channels. Outputs will include rigorous and significant contributions to knowledge (peer reviewed academic conference papers, and journal articles) and other knowledge exchange formats including white papers, reports, blog posts and presentations at conferences and seminars. Dissemination also involves enabling the sharing of data sets, in accordance with principles of open science.
6. Actively participate in the activities of the Project team in Belfast and Southampton and contribute to the development of the FortranFuture roadmap.

At this stage we are recruiting for a **two**-year Research Fellowship with the potential to extend for a third year (subject to funding).

The Research Fellow must be based in the UK and must be willing to travel to events around the UK and, preferably, abroad. The Research Fellow would also preferably be located close to one of the two lead institutions.

MAJOR DUTIES:

Research and Scholarly Activity:

1. Undertake one or more reviews of scholarly debates and the wider policy landscape relevant to the network's activity (and potentially systematic reviews, e.g., systematic mapping).
2. Identify, design and conduct research using a range of appropriate methodological techniques with the aim of understanding the international Fortran-based science communities, and the Fortran ecosystem including the policy landscape. This research would, as a minimum, be qualitative but will also preferably be quantitative too, e.g., interviews, focus groups, observation and ethnography, survey design and data analytics.
3. Actively engage with the interdisciplinary research undertaken through the flexibly-funded investigations, and support the integration of outputs from those investigations to ensure a coherent body of research for FortranFuture.
4. Actively engage with the interdisciplinary research network and the community of practice, participating in community events, including co-facilitation of such events and supporting the collection, analysis and dissemination of data to ensure diverse voices in the community are heard.
5. Disseminate the work of the FortranFuture through appropriate channels. Outputs will include rigorous and significant contributions to knowledge (peer reviewed academic conference papers, and journal articles) and other knowledge exchange formats including white papers, reports, blog posts and presentations at conferences and seminars. Dissemination also involves enabling the sharing of data sets, in accordance with principles of open science.

Teaching and education:

Teaching and education activities are expected to only occur in exceptional circumstances that either have direct value to the FortranFuture project and/or to the professional development of the Research Fellow. Indicative examples are:

1. Identify, justify, design and then develop educational resources for the Fortran-based scientific community, e.g., tutorials, software carpentries, developer guides.
2. Design and deliver one-off specialist lectures, or equivalent, to taught and research students, at Queen University Belfast, University of Southampton, partner institutions or other identified organisations or events, as these relate to the FortranFuture project.

Administration/Contribution to the Community:

1. Manage personal administrative tasks related to one's own work.
2. Contribute to the effective management and administration of FortranFuture project by performing routine duties allocated by the Project Lead or their nominees, including other members of the investigative team.
3. Where appropriate, participate in committee membership within Queen's University Belfast, or in institutions related to the FortranFuture project.

ESSENTIAL CRITERIA:

1. Normally have or be about to obtain a relevant PhD. In a research area that supports the interdisciplinary and sociotechnical aspects of the project, for example: in a social science discipline such as digital sociology or anthropology, socio-technical studies, information systems, systems thinking, or in a technical discipline with socio-technical dimensions such as Computer Supported Cooperative work and Human Computer Interaction, software sustainability and computational sciences.
2. Significant relevant research experience to include; Experience in research design and the use of qualitative research methods to collect data (for example interviews, focus groups, observation and ethnography) and analyse data (for example NVivo and other CAQDAS tools)
3. Ability to contribute to broader management and administrative processes, including organising and facilitating events
4. Ability to undertake research ethics applications, to organise research resources, and manage research data, e.g., to support open science.
5. Some understanding of scientific or engineering communities broadly and familiarity with debates and concepts in relevant academic fields.
6. Ability to communicate complex information clearly, in written outputs and oral presentation.
7. Willingness and ability to travel to and participate in network-related events and activities, e.g., and project meetings, workshops and international conferences.

DESIRABLE CRITERIA:

1. Experience in use of quantitative research methods to collect data and analyse data (for example survey design, Excel, Stata, R, Python),
2. Experience of undertaking a review of policy landscape in an appropriate area.
3. Experience of working with software communities broadly (for example open source or RSEs) and familiarity with debates and

concepts in academic fields relevant to those communities.

4. Understanding of and or experience working with Fortran communities.
5. Demonstrable ability to undertake academic literature reviews, including systematic reviews.
6. Expertise in specific research tools acquired through external training courses. A strong track record in publishing in academic journals.

Additional Information:

Informal enquiries can be directed to: Dr David Cutting - d.cutting@qub.ac.uk.